Notice of Allowability	Application No. 10/579,418	Applicant(s) STEK ET AL.	
	Examiner Phuong Huynh	Art Unit 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *amendment filed on 11/14/2007*.

2. ☒ The allowed claim(s) is/are *1,2 and 5*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Allowable Subject Matter

1. Claims 1, 2, and 5 are allowed.

2. The following is an examiner's statement of reasons for allowance:

Fujii et al. (hereinafter "Fujii") (US Patent No. 5,808,462) discloses an apparatus for detecting the amplitude and phase of an a.c. signal. The apparatus includes a signal detection circuit for detecting the a.c. signal, a signal splitting circuit for splitting the detected AC signal into first and second AC signals out of phase with each other by 90.degree.. The signal splitting circuit includes a first order lag circuit having a phase lag, a subtractor, and first and second amplifying circuits. The apparatus also includes a phase compensation circuit coupled to the signal splitting circuit for receiving the first and second a.c. signals from the signal splitting circuit and for advancing the phase of an output signal of the apparatus by the phase lag of the first order lag circuit. The phase compensation circuit also includes an amplitude and phase detection circuit for detecting the amplitude and phase of the detected a.c. signal by implementing a polar coordinate transformation of the first and second a.c. signals received from the signal splitting circuit [see Fujii: Abstract; col. 6, lines 1-19; col. 6, line 57-col. 7, line 31; and col. 8, line 55-col. 9, line 9].

Kachi (US Patent No. 5,677,686) discloses an absolute position detection apparatus which comprises sine and cosine wave generators for generating one or more sets of sine and cosine waves within a cycle, analog-to-digital converters for converting the incoming sine and cosine

waves generated by the sine and cosine wave generators into digital values. An arithmetic unit is used for calculating a compensation for errors including offset, amplitude and phase errors on the basis of the digital values from the analog-to-digital converters. In the apparatus, the arithmetic unit operates on a phase angle from phase angles found by the arithmetic performed prior to or during said error compensations and the digital values from the analog-to-digital converters, whereby a low-priced, highly reliable absolute position detection apparatus can be achieved without the addition of compensation circuits to the hardware [see Kachi: Abstract; col. 7, line 59-col. 8, line 61; col. 11, line 35-col. 12, line 7].

Matuyama (US Patent No. 5,663,643) discloses a position detecting apparatus for a scale measuring system executes a offset correction of the detected three-phase signals A, B and C by using the arithmetic mean (A+B+C)/3 as an offset value. Further, the apparatus executes a gain correction of the offset corrected signals by using a gain which is obtained by the calculation of a square-root of $[A^2 +(B-C)^2 /3]$. Therefore, the accurate measurement is executed by this apparatus even if the gain level is changed at a turn-on of an electric source of this apparatus [see Matuyama: Abstract; col. 2, line 55-col. 3, line 6; col. 4, line 57-col. 5, line 43].

Regarding claims 1, 2, and 5, the combination as claimed wherein "weighting an inverse sine value of the amplitude corrected sine component (sin(x)) with a weighting factor for favoring the inverse sine value around its zero crossings to obtain a weighted sine value, weighting an inverse cosine value of the amplitude corrected cosine component (cos(x)) with a weighting factor for favoring the inverse cosine

value around its zero crossings, to obtain a weighted cosine value" is not disclosed, suggested, or rendered obvious by the prior art of record.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Huynh whose telephone number is 571-272-2718. The examiner can normally be reached on M-F: 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on 571-272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Phuong Huynh
Examiner
Art Unit 2857

PH
November 21, 2007

JEFFREY R WEST
EXAMINER - AU 2857